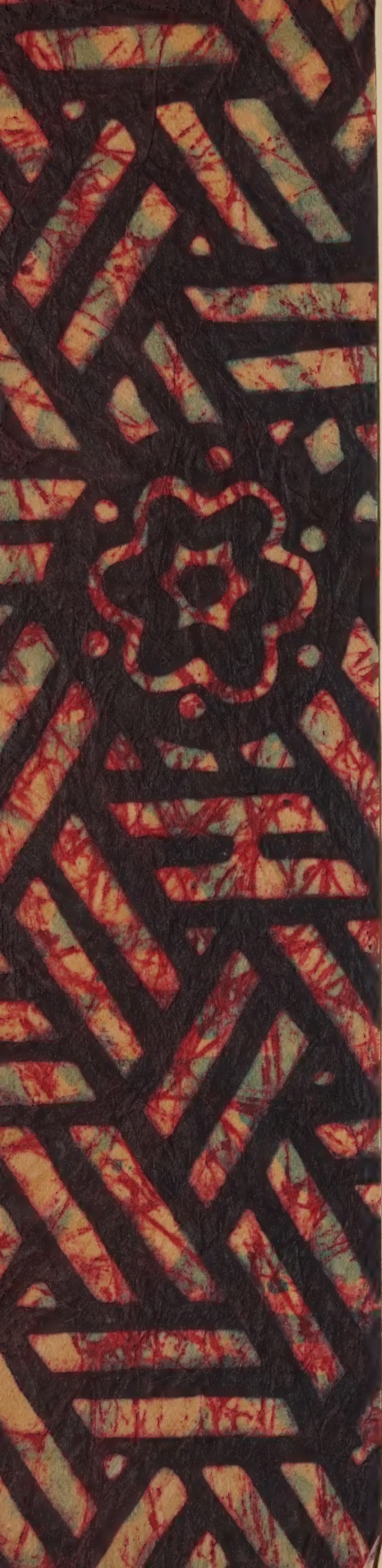


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*An American Tribute
to a Danish Savant*


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AN AMERICAN TRIBUTE TO A DANISH SAVANT

THE EMIL CHRISTIAN HANSEN MEMORIAL

ERECTED IN RIBE BY
THE ALUMNI ASSOCIATION OF THE
WAHL-HENIUS INSTITUTE
CHICAGO

o

BY ROGER NIELSEN

COPENHAGEN, DENMARK
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Quiet and peaceful, Main Street, Ribe, Denmark

LINKING PAST AND PRESENT

It is a far cry from Ribe to Chicago. On the one hand, a small town over ten centuries old, hidden away unchanged in a far corner of Denmark, quaint and peaceful and with about the same number of inhabitants as when Columbus set sail for the Indies. On the other, the youngest of the great cities of the world, a roaring metropolis in the very heart of the American continent — Chicago which every month, year in and year out, adds to its growth a city of the size of Ribe.

And yet, one summer's day a couple of years ago a citizen of Chicago came to Ribe and there conceived an idea that always will unite the two cities. It was Dr. Max Henius, the well-known American of Danish extraction. While strolling through the streets of Ribe he noticed an old house and on it a marble tablet bearing the inscription, that here was born Emil Chr. Hansen, the Originator of Pure Yeast Culture, who renewed the industries of fermentation. Nothing could have interested Dr. Henius more,

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for he was one of the founders of the Wahl-Henius Institute of Chicago, an institution which had been the first to introduce Emil Chr. Hansen's ideas in the United States, and whose work to a large extent had been based on the discoveries of this Danish savant.

It was with a feeling of reverence that Dr. Max Henius halted before the house where Emil Chr. Hansen first saw the light of day. Although the Wahl-Henius Institute has ceased to exist in its original form because of Prohibition, many of its old pupils hold important positions throughout the world and utilize Hansen's discoveries, especially his method of pure yeast culture. They keep in touch with their Alma Mater through the Alumni Association of the Wahl-Henius Institute of Chicago, and as Dr. Henius recollected that a fund of about \$ 3000 had been accumulated by the Association and that he had been requested to find suitable use for this money there came to him a sudden realization that nothing could be more natural than to use the fund to erect a monument to Emil Chr. Hansen in the town of his birth.

While in Ribe Dr. Henius learned that a local committee headed by the editor of the *Ribe Stiftstidende*, Mr. Willemoës, had considered a similar plan but had failed of realization because of a lack of funds. On his return to Chicago in October 1924 Dr. Henius approached the governing committee of the Alumni Association with his plan for a Hansen monument in Ribe and at once secured the full approval of this body. He came to Denmark again in December and, through the present writer, Mayor Kaalhauge of Ribe was asked whether the town council would accept a memorial to Emil Chr. Hansen. Upon receiving an affirmative answer Dr. Henius went to the well-known Danish sculptor Anders Bundgaard and requested him to submit a design for the monument.



*Buoy,
dynamic, turbulent,
State Street, Chicago*

The sculptor lost no time in getting to work and when he and Dr. Max Henius arrived in Ribe on December 12th they had with them a clay model of the projected monument. As a symbol of the yeast cell in pure culture, Hansen's greatest scientific achievement, Bundgaard had created a chaste feminine figure, rising out of the fermenting mass of an antique brewer's kettle. The figure was to be cast in bronze and placed on a tri-faced granite base having in front a bronze medallion with the portrait relief of Emil Chr. Hansen. The whole monument was to be about nine and a half feet high. Two inscriptions only were to be hewn in the granite base. On the right side these lines: »In Memory of Emil Chr. Hansen, Biologist, born in Ribe May 8, 1842«. And on the left: »Presented by the Wahl-Henius Alumni Association, Chicago U. S. A., June 28, 1925«.

At an executive meeting of the town council at which Dr. Max Henius and Mr. Bundgaard were present, Dr. Henius, on behalf of the Wahl-Henius Institute's Alumni Association, officially offered the monument to Ribe. In reply Mayor Kaalhauge said that the council unanimously had voted in favor of accepting the splendid gift and asked Dr. Henius to convey to the Alumni Association the heartfelt thanks of the town. The model was sanctioned without a dissenting vote and the council then passed a resolution in favor of erecting the monument in a park at the small river in the middle of the town, undoubtedly the most beautiful site that could be selected.

This closed the formal side of the question and the sculptor set to work on the statue. Dr. Henius returned to Chicago in March 1925 and on his arrival a meeting of the Alumni Association's governing committee was summoned to learn how the matter was progressing. Besides the chairman, Mr. Max Stahl, the following members of the committee were present: Herman



*Unveiling
the Memorial at
Ribe, June 28th, 1925*

Kroeplin, E. T. Henius, Wm. Faude and J. Boesenberg. After Dr. Max Henius had conveyed the thanks of the town of Ribe and shown photographs of the projected monument, the committee passed a vote of thanks to Dr. Henius for his work for the Hansen monument and requested him to represent the association at the unveiling.

The day of the ceremony was the twenty-eight of June. It dawned warm and clear and with the mediæval town as a wonderful setting. On the greensward close by the peaceful stream, dotted with boats, the veiled monument stood framed by foliage. At intervals Ribe's famous storks flapped by on their way from the marshes to their nests on the roofs of the old town. All the buildings were gay with flags, Denmark's Dannebrog and Old Glory hung side by side, and hundreds of spectators had come from the whole countryside.

Mayor Kaalhauge opened the ceremony on behalf of the town of Ribe and read several telegrams of congratulation: from the Alumni Association's committee who sent hearty greetings and regretted that they were unable to attend in person, from the American minister to Denmark, Dr. Prince, and from Vice-President Tufts of Chicago University who expressed his admiration for the eminent biologist Emil Chr. Hansen.

Dr. Max Henius then spoke of Ribe, that ancient, enchanting town which had fostered so many famous men. Among those who also had gained a name in America was Emil Chr. Hansen whose researches had meant so much to science as a whole. It had been a natural thought for the Alumni of the Wahl-Henius Institute to use their funds for a monument to the great teacher they never had seen but from whom they had learned so much. The chairman, Mr. Max Stahl, had been unable to come himself but had asked the speaker to convey his best wishes to Ribe and to those who were assembled here.

Dr. Henius thereupon presented Mayor Kaalhauge with the handsome document which made the statue the property of Ribe. Then, while the band was playing and everybody rose, a young girl stepped forward and unveiled the beautiful monument. After the director of the Carlsberg Laboratory, Dr. S. P. L. Sørensen, had delivered the oration on Emil Chr. Hansen which will be found in the following pages, Mayor Kaalhauge spoke again. As the representative of the citizens of Ribe he officially received the monument and thanked the donors for the great gift. He declared that it would always be a welcome duty for Ribe to care for the monument so that in times to come it could stand as a reminder of one of the town's best sons, and he concluded by proposing cheers for the Wahl-Henius Institute's Alumni Association, four of whose members were present at the ceremony: Poul C. Poulsen, Vagn Jacobsen, Louis Henius and Hakon Arntz.

The representative of the Danish Government at the unveiling, Mr. N. C. Hauge, Secretary of Interior, spoke of Emil Chr. Hansen as an example of a man who had worked his way to success. His achievements would ever be an inspiration to the youth of the country and the Secretary was glad to be present on this occasion. On behalf of the nation and of Denmark, he thanked the donors of the monument.

This closed the ceremony but there still remained an impressive moment when Emil Chr. Hansen's aged sister, Fru Jensen, rose from her place and laid a wreath at the base of the memorial.

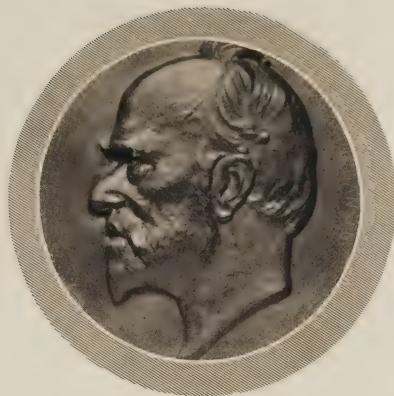


*The
Wahl-Henius
Institute, erected 1905*



THE WAHL-HENIUS INSTITUTE

The Wahl-Institute was established at Chicago forty years ago as a Scientific Station for Brewing. The founders were Dr. Robert Wahl and Dr. Max Henius, who in 1891 added a Technical College for brewing, malting, bottling and engineering to the Institute. Originally located on Chicago Avenue, the Institute later moved to South Water Street and finally to 1135-47 Fullerton Avenue in a large new building, erected especially for these purposes with modern laboratories, a museum with numerous models, a large and valuable library and a complete experimental brewery with malting and bottling plants. ¶ As early as 1886 the Institute introduced the Emil Chr. Hansen Pure Yeast Culture in American breweries, and in 1892 started special courses of instruction in Hansen's system. In 1901 the Institute published *The American Handy Book of the Brewing, Malting and Auxiliary Trades*; a third edition in two volumes was issued in 1908. In 1906 *The Beer Bottlers' Handy Book* was published and in 1913 the *Handbook on Brewery Engineering and Mechanical Refrigeration*. On account of prohibition the college was closed in 1917, the laboratories remaining. More than 1200 graduates have issued from the college of the Institute. The Wahl-Henius Alumni Association was formed in 1891 and once had a membership of 1000.



EMIL CHRISTIAN HANSEN

A BIOGRAPHICAL SKETCH BY S. P. L. SØRENSEN, M. D., PH. D.
DIRECTOR OF THE CARLSBERG LABORATORY, COPENHAGEN

"**H**ERE on the 8th of May 1842 was born Emil Chr. Hansen, Originator of Pure Yeast Culture, Renewer of the Industries of Fermentation, Director of the Carlsberg Laboratory from 1879 until his death, Aug. 27, 1909."

Such is the inscription on the memorial tablet which the Tourist Association of Ribe has placed on the house where Emil Chr. Hansen was born. Briefly it gives the outstanding features of his life and work, and behind the simple words we get a glimpse of the energy, the will power, the perseverance and the high ability that made this work possible. Who was this man then, and what significance may we attach to his achievements?

Many of those present today have known his parents. His father especially, Joseph Christian Hansen, was a remarkable man. A painter by trade, he had seen much of the world in his younger days and experienced both fortune and misfortune, mostly the latter. He had been in Paris during the July Revolution, had fought later in Algiers and Spain, and in our first Slesvig War he served under Olaf Rye.

Emil Christian, the oldest of the children, had inherited much of his father's restlessness and wanderlust and this in connection with reduced circumstances at home soon led him into the field where he was to carry out the work of his manhood. From his father he had another quality: a perseverance that never failed or swerved when difficulties arose. And there is no doubt that his severe upbringing and the poverty of his home developed in him a dauntless energy that enabled the ambitious young man to overcome the many obstacles that met him in later life. His inclination was bent upon study but circumstances made this impossible, and less than fourteen years old, he was apprenticed to a shopkeeper. Nothing could have been more against his wishes, however, and after six months had passed his parents allowed him to leave. He made every effort to get into some other trade but in vain. Finally he entered his father's employ as an apprentice and at the age of eighteen became a journeyman painter. His apprenticeship over, he felt the call of the road and on April 16, 1860 the chief of police in Ribe issued a »Wander-book« bearing the name of Emil Chr. Hansen, journeyman painter. He wandered through a large portion of Denmark and the duchies of Slesvig and Holstein, doing whatever work he could find. He had, as he said himself »a not inconsiderable ability in painting portraits and landscapes and perhaps also some talent in that direction«. And for a time he considered becoming an artist. Among his known works is a copy of Jens Roed's large painting in the Church of St. Catherine in Ribe, »Christ on the way to Golgatha«. When Hansen finally succeeded in getting to Copenhagen he applied for admission to the Academy of Fine Arts but was rejected.

This led him to abandon art and fully devote himself to study. During his wanderings he had read whatever he could get a hold of, particularly natural history. He had also found time to



*The house
in Ribe, Den-
mark, where Emil
Chr. Hansen was born.*

study languages. It was his intention to prepare for teaching but again lack of money was a hindrance despite small sums earned now and then by drawing and giving lessons. He had already decided to give up his studies when he was offered a position as private tutor at the manor of Holsteinborg. This marked a turning point in Hansen's life. His work as a tutor enabled him to continue his studies in natural history and prepare for examination as a teacher. Aided by Count Holstein of Holsteinborg he spent some time in Copenhagen and thereafter passed his examination.

But Hansen had a still higher aim in mind. He gave lessons and wrote short stories for a living and at the same time studied so intensely that for a while failing health forced him to cease and again take a position in the country as a private tutor. Despite all obstacles, however, Hansen, after successfully finishing the Monrad course for teachers at the Copenhagen Institute of Technology, finally succeeded in matriculating at Copenhagen University in 1871, twenty-nine years old.

Immediately after matriculating Hansen began to specialize in botany in which subject, however, he never passed final examinations. He was made assistant to Professor Japetus Steenstrup and took part in the latter's investigations of the peat bogs of northern Zealand. This formed the subject of Hansen's first scientific thesis which appeared in 1873. Three years later he won the university's gold medal with an essay on Danish manure fungi. About this time Hansen established connections with the Carlsberg Breweries. The brewer Carl Jacobsen, of the New Carlsberg Brewery, needed a man of scientific training to make the daily microscopic tests of the beer and at the recommendation of Japetus Steenstrup the position was given to Hansen. It was not long, however, before he was transferred — at the request of the father of Carl Jacobsen, the brewer J. C. Jacobsen — to the position of director of the physiological section of the Carlsberg Laboratory.

Assured of a regular income Hansen was now able to have a home of his own and in 1880 he married Miss Mathilde Melchior who until then had been head matron at the Old Carlsberg Brewery. He had a good laboratory at his disposal and favorable conditions for research, and he lost no time in devoting himself to that study of fermentative organisms which later was to bear such rich fruit. On the results of the work of this first period, collected under the title »On Organisms in Beer and Wort«, he based a thesis for his doctor degree.

This is scarcely the place for a detailed description of Hansen's numerous scientific writings; they are of too special a character for that. But a complete understanding of the importance of his work is not possible without some idea of the science of fermentation at the time he made his investigations. Of that I should like to say a few words.

In the latter part of the Fifties and the beginning of the



*In his youth
Hansen lived in
this house in Ribe*

Sixties of the past century the epoch-making work of Louis Pasteur, the great French chemist and micro-biologist, had wholly revolutionized micro-biology and the practical application of this science especially with respect to fermentation.

At that time the position of the yeast industry was not an enviable one. Its only basis was experience and tradition handed down from one generation to another, and knowledge of how fermentation really took place was totally lacking. Although the accepted methods usually led to the desired result there would sometimes appear puzzling irregularities which completely changed the character of the fermentation and occasioned heavy losses. From science the industry could expect no aid as the prevailing fermentation theory, whose chief exponent was Liebig, assumed that the chemical changes during fermentation occurred without the direct agency of the yeast. Closely connected with this viewpoint was the prevalent conception of the question of »spontaneous generation«, or the production of living organisms in a narrower sense, ferments and bacteria, from non-living matter.

The fact that large quantities of micro-organisms could be observed during the fermentation of grape juice or beer wort, the souring of milk or the putrefaction of food while as a rule such organisms could not be detected in fresh materials, made it natural to conclude that they »arose from within«.

Pasteur then showed that all the micro-organisms, fungi and bacteria that cause fermentation, putrefaction and the innumerable diseases now called infectious, are found in the air, in the soil, in water, etc., in short, in the world about us. They are thus able to penetrate everywhere and under favorable conditions multiply with great rapidity and exert the effect peculiar to their species. If, on the other hand, such micro-organisms are kept out, nothing happens. The grape juice does not ferment, the milk does not sour, the meat does not spoil, for the micro-organisms cannot arise of themselves. Fermentation and putrefaction are processes connected with the activity of living organisms and can only take place when these are present. A really sterile fluid will remain sterile and neither ferment nor spoil in connection with sterile, that is to say germ-free air. Fungi and bacteria are subject to the usual laws of nature. They cannot arise of themselves but are formed by mother-cells of the same species.

Pasteur's views met with violent opposition but he disarmed all arguments by new experiments. Moreover, and not least important, his theories proved tenable in practice. He showed that the unsuccessful fermentation of vinegar, wine, beer, alcohol, etc., was due to »impure« fermentation. He explained that foreign micro-organisms, bacteria for example, had made their way into the fermenting fluid and caused the »diseases« in the vinegar, the wine, etc., which the producers of such commodities continually had to fight against. He taught them, moreover, how such diseases could be prevented by keeping out these foreign organisms as far as possible and how they, if present, could be



*The Memorial,
symbolizing the birth
of the Pure Yeast Cell*

rendered harmless by heating, the process which today is still known as Pasteurization. The research of Pasteur revolutionized primarily the whole theory of infectious diseases but in no less degree fermentation as well. And yet, Pasteur's work in fermentation was but the first step in the right direction; the next was taken by Emil Chr. Hansen.

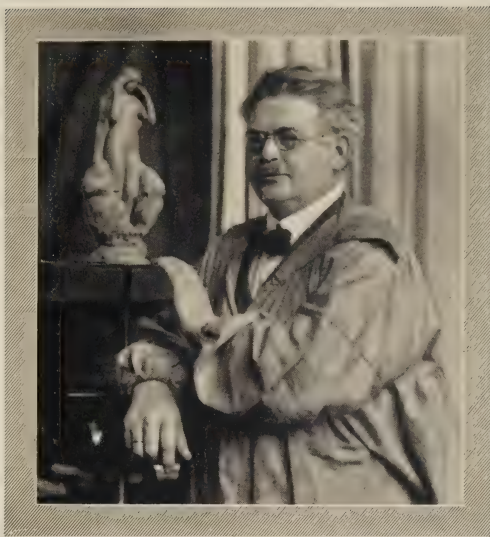
Pasteur had made a sharp distinction between fungi and bacteria and had shown that the presence of bacteria in the yeast was the cause of the many diseases of wine and beer. Hence Pasteur understood by »Pure Yeast« a yeast free from bacteria, and the methods of purification and culture proscribed by him aimed at hindering the development of the bacteria. By this means it was often possible to combat certain diseases in beer and wine, but at times even Pasteur's Pure Yeast could occasion severe disappointments.

At this point Hansen began his research. He showed that Pasteur's Pure Yeast was a combination of many different yeasts with highly different qualities and above all he showed that some kinds of yeast produced good beer and some inferior beer. The first kind he called »culture yeast«, the second »wild yeast« or »disease yeast«.

At first glance it would seem that the solution of the problem of beer diseases lay near at hand, but a closer consideration of the question reveals the difficulties Hansen had to overcome before he could definitely prove his theory.

In the first place he had to procure a yeast that could be termed »pure«. That is to say, the yeast should not merely be free from bacteria. It should also be pure in the sense that it was not a combination of yeasts but exclusively made up of one and the same species. With this object in view Hansen evolved his method of Pure Yeast Culture. He started with one cell singled out from the yeast mixture by a special method. Placed

¶ Anders Bundgaard, the noted Danish sculptor, was born in 1864. Among the many significant works of this artist are the monumental Gefion Fountain on Langelinie, Copenhagen, and more recently the beautiful Memorial Hill, erected by Americans of Danish descent in Søndermarken, Copenhagen. The fine sympathy and understanding that always characterizes his work makes Anders Bundgaard especially fitted for artistic problems of this kind.



*Bundgaard with
the clay model of
the Hansen Memorial*

in sterile beer wort, it was allowed to grow and reproduce itself until from this one mother-cell he gradually secured enough cells for experiments in the laboratory and later in the brewery. As the starting point was a single sell, all possibility of anything but one species was excluded. By applying this method to ordinary brewer's yeast Hansen now produced a series of pure culture yeasts. The next question was to determine in how far these samples differed. In other words, how was he to decide whether he was working with one or several species of pure cultivated yeast.

A certain classification of yeasts had existed before then but almost without exception it was based on the shape and size of the cells as seen under the microscope. And Hansen was easily able to prove that this classification was incorrect as the shape and size of the cells varied with the conditions under which the yeast was cultivated. He therefore began a systematic observation of his pure samples. He studied their growth and reproduction their fermenting capacity and other qualities under a surplus of

air or a lack of oxygen, with sufficient nourishment and restricted nourishment. In short, he observed a number of characteristics which enabled him to decide whether the pure culture samples belonged to the same or different species. By experiments on a lesser scale he was also able to determine which species produced good and which inferior beer.

It now happened — fortunately one might say — that in these years both the Tuborg and the Old Carlsberg breweries had considerable trouble with the quality of their beers. At the Tuborg Brewery the beer, after being bottled for a few days, fermented and thickened. With the aid of his method of pure culture Hansen isolated the three kinds of yeast used at Tuborg and showed that one of them, constituting the greater portion of the yeast mixture, produced good beer while the other two were responsible for the objectionable disease. At the Old Carlsberg Brewery the beer would at times have an excessively bitter taste and an unpleasant odor, a condition which Captain J. C. Jacobsen, a great admirer of Pasteur, attributed to a bacteria infection. Hansen could find no trace of such an infection. He did, however, isolate four different species of the yeast used and showed that only one of these species produced normal beer with good taste and odor. It is this species which since has become famous all over the world as Carlsberg Bottom Yeast No. 1. The other three species were disease yeasts, one of which gave the beer the dreaded bitter taste and unpleasant odor.

As I have already indicated, Jacobsen was at first inclined to share Pasteur's views and looked with some doubt on Hansen's new theories. But on November 12, 1883 the first, large-scale experiment with pure culture Carlsberg Bottom Yeast No. 1 was carried out at the Old Carlsberg Brewery. It was a complete success and Jacobsen was the first to recognize the importance of Hansen's research and theories. He introduced pure cultu-



*Dr.
Max Henius
presenting the deed
to Mayor Kaalbaug*

re yeast at his brewery as part of the process, and in addition to using his great influence in the brewing world to spread the reform and secure its recognition he displayed the greatest liberality in placing pure yeast at the disposal of experimenters.

But Hansen had to make still greater efforts and overcome many difficulties before his ideas were acknowledged abroad. Both in England and Germany and equally so in Pasteur's native France, they met with the greatest opposition. Hansen succeeded in convincing even the most sceptical, however. Pasteur himself fully acknowledged Hansen's great contribution to science and in 1886, at the recommendation of Pasteur, the Danish scientist was awarded a gold medal by »La Société d'encouragement pour l'industrie nationale« in Paris. But Hansen always regarded Pasteur as the great teacher and to give an idea of the relations between the two I should like to quote a passage from one of Hansen's books. He writes:

»My research thus being governed by other points of view than Pasteur's I was able to arrive at practical and theoretical

results that could not have been gained by following the course marked out by him. But that his research was a very important preliminary work that gave me support in more than one direction, I shall always acknowledge. It was the greatest of its time and has been of far-reaching use. And when my theories and my methods are replaced by those more perfect, may they at least merit like praise.

Hansen's modest wish has been fully realized. His theory and method of pure yeast culture has changed not only the brewing industry but all practical fermentation as well. For nothing was more natural than that the principles which had been applied at the Carlsberg Breweries with so great success should eagerly be seized upon by other scientists and brought into use everywhere in the study of microorganisms or their industrial utilization.

Today Hansen's system of pure culture is used all over the world in breweries, in yeast factories, in distilleries. In wine production it is of enormous importance. It forms the basis of the souring process in butter manufacture and rational cheese-making, and in medicine it has proved of the greatest value in the study and solution of a number of important problems. It is therefore with full justification that the memorial tablet commemorates him both as the »originator of pure yeast culture« and the »renewer of industrial fermentation«.

It would lead too far today to touch upon the great amount of purely scientific research which Hansen in the remaining years of his life carried out with a clarity and thoroughness that have made his work a pattern for future generations and given him a place among the great scientists of the world. There is but one more point to which I should like to draw attention. That is Hansen's understanding of the importance of earnest co-operation between science and practice. Again and again he

To the Memory of
Emil Christian Hansen

In recognition of his Notable
 and Invaluable Achieve-
 ments in Biological Re-
 search and their Practical
 Applications, we present with deep
 gratitude this Monument
 to the city of his birth,

RIBE, DENMARK.

Chicago, U.S.A., the twenty-eighth of June, MXMXXV.

Alumni Association of the Wahl-Henius Institute

Board of Directors

Herman T. Kroepelin

J.H. Rosenberg

George B. Lippel

Emil T. Henius

Willi Hansen

Adolf F. Fahl

Secretary

Chairman

*The handsome
 document, designed
 and executed in Chicago*

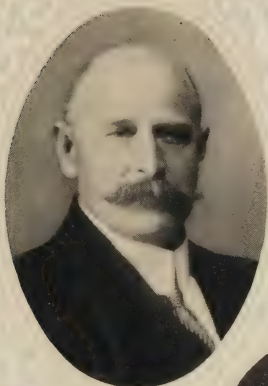
FACSIMILE OF THE BEAUTIFULLY LETTERED AND ILLUMINATED DEED BY WHICH THE ALUMNI ASSOCIATION OF THE WAHL-HENIUS INSTITUTE, CHICAGO, TRANSFERRED THE OWNERSHIP OF THE EMIL CHR. HANSEN MEMORIAL TO THE CITY OF RIBE AT THE UNVEILING JUNE 28th 1925.

has given expression to this, most fittingly perhaps in the introduction to his great series entitled »Practical Studies in Fermentation«. Here he has taken as his motto a quotation from one of Pasteur's works: »The scientist knows no greater joy than making new discoveries but doubly felt is that joy when he sees these discoveries find immediate application in practical life«.

It was but natural that the adversity Hansen had met with in his childhood and youth should have influenced his opinion of mankind and made him sensitive to criticism. He keenly felt the attacks upon his theories, especially his method of pure culture and its practical application. Often indeed, he was not far from regarding the attacks rather as personal than otherwise. To Hansen scientific research was a fight against misunderstanding and illwill, a struggle for the recognition of truth. And it was not mere chance that made him insert a clause in his last will and testament bequeathing part of his means to be used for the benefit of those who — to quote his own words — »after me shall carry on the struggle in the field of micro-biology«.

But as time passed and Hansen's theories went their victorious way throughout the world, his view of life became milder and the many, well-merited marks of honor bestowed upon him both at home and abroad were at last a real joy to him.

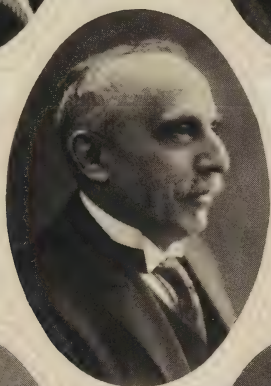
One would be tempted to believe that the studies which Hansen pursued with almost incredible perseverance and energy had made him a dry, one-sided theorist. This was far from being the case. He never forgot the artistic interests of his youth and on his travels he had always an open mind for the beauties and wonders of nature. Until his death Hansen undertook scientific studies in field and forest as a change from his laboratory work: few were as versed as he in Denmark's flora and fauna. His interest in social problems was great and he was far from being endowed with brain only. He felt particular sympathy for those



C. N. Hauge



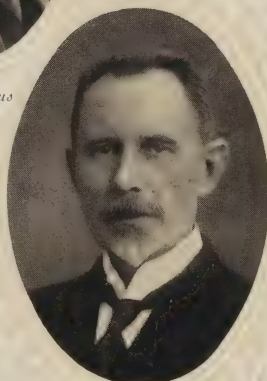
Max Stahl



Dr. Max Henius



H. Kaalhaug



S. P. L. Sørensen

*Americans
and Danes who
honored the memory
of Emil Cbr. Hansen.*

MAYOR KAALHAUGE, DR. HENIUS, PROFESSOR SØRENSEN AND SECRETARY HAUGE SPOKE AT THE UNVEILING. MR. STAHL SENT GREETINGS

who had experienced the hard side of life and had difficulty in getting ahead. Hansen knew himself how unmerciful life and fate can be, and quietly and unpretentiously he and his wife helped the needy to the best of their ability. In their will they showed that they had not forgotten the »poor and the sick« both in Valby, where his life work was, and in Ribe.

Hansen's active life came to an end before he reached three-score and ten, and his wife survived him but a few months. He was a real Dane who felt the truth of Rask's words that to his country a man owes all that he can accomplish. But his work reached greatly beyond the borders of his country and carried his and Denmark's name far and wide. It is not often that the great world honors in gratitude and admiration as it does today, a Danish scientist and the town that fostered him.

The town of Ribe and Danish science and industry are honored to receive from friends and kinsmen beyond the Atlantic, this beautiful monument. May it be cherished here in memory of Emil Christian Hansen and the work he accomplished with untiring energy and in earnest striving toward the recognition of truth.





*View of the
ancient city of Ribe*

PHOTO BY A. LAURIDSEN

RIBE — THE OLD TOWN

RIBE is the most interesting of the provincial towns of Denmark, because it looks its age. It is probably the oldest city in Scandinavia; how old nobody knows. Long before Denmark was christianized, people had settled on the islets in the Nebs River, and a bishopric was established here as early as the year 948.

For centuries Ribe was a most important city, and the Kings of Denmark often lived at the castle Riberhus. The famous King Valdemar the Victorious preferred Riberhus to his other castles and many a tournament was held there during his reign. At that time Ribe was the chief seaport of Denmark, and the commercial center of the kingdom. But gradually it lost its importance, as the better situated Copenhagen took its trade, and navigation became impeded with silt choking up the river. If old traditions can be believed, however, a ship called *De Bonte Koe* left Ribe with emigrants for America as late as 1663.



*The
800 year old
Cathedral of Ribe*

Ribe is now one of the smallest cities of Denmark but throughout the centuries many famous men, poets, scientists and church dignitaries lived there. One of its sons who, in the words of Roosevelt, became »the most useful citizen of New York«, was Jacob A. Riis, whose book on Ribe »The old Town« is still widely read in the United States.

Ribe has kept its mediæval aspect more than any other city in Denmark. Many of the old buildings are still preserved, most noteworthy the city hall, mentioned as early as 1496; the old monastery from the 13th century and especially the immense cathedral, one of the greatest and finest buildings in all Scandinavia, the erection of which was started by Bishop Thore more than 800 years ago.



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